

CLAIMS:

1. A method for providing video on demand (VoD) playback, comprising:
5 receiving at a VoD player (300) a plurality of program segments (200), each corresponding to a fractional part of an entire program
receiving at said VoD player (300) a key table (201) containing packet count information corresponding to the number of data packets contained in at least one of said program segments;
10 identifying an end point of at least one of said plurality of program segments by counting a number of data packets that are decoded for playback.
2. The method according to claim 1 further comprising the step of counting a number of data packets relative to the beginning of a program segment.
3. The method according to claim 1 further comprising the step of associating at
15 least one program segment (200) with a unique program identifier (PID) (206) based on information contained in said key table (201).
4. The method according to claim 1 further comprising the step of receiving and recording at said VoD player (300) at least part of one of said plurality of program segments (200) during the playback by said VoD player (300) of a previous one of
20 said plurality of program segments (200).
5. The method according to claim 1 further comprising the step of beginning a playback of at least one of said plurality of program segments (300) responsive to a determination that a preceding one of said plurality of segments in said program is approaching said end point.
- 25 6. The method according to claim 1 further comprising the step of receiving at said VoD player (300) a segment packet count (SPC) data for one or more of said plurality of program segments (200), said SPC data identifying a position within a program segment of a received packet containing program segment data.
7. The method according to claim 6 wherein said SPC data is private data (212) in
30 the adaptation field of the MPEG-2 transport.

8. The method according to claim 6 further comprising the step of monitoring said SPC field of data packets received at said VoD player (300).

9. The method according to claim 8 further comprising the step of comparing said SPC field data to a number of data packets contained in at least one of said plurality
5 of program segments (200) to identify the occurrence of missing packets.

10. The method according to claim 8 further comprising the step of discarding packets received by said VoD player (300) that have SPC field data values corresponding to packets that have already been stored by said VoD player (300).

11. The method according to claim 8 further comprising the step of counting a
10 number of data packets received by said VoD player (300) for at least one of said plurality of program segments (200).

12. The method according to claim 11 further comprising the step of determining that a segment has been completely received when a total number of packets received for a segment is equal to a total number of packets for said segment as
15 identified by said SPC data in said key table (201).

13. The method according to claim 12 further comprising the step of determining an end of a segment based upon a discontinuity in at least one of a system clock reference (SCR) field and a presentation time stamp (PTS) field.

14. A method for providing video on demand (VoD) playback, comprising:

20 defining a plurality of program segments (200), each corresponding to a fractional part of an entire program;

transmitting at least two of said plurality of program segments concurrently, with each program segment separately identifiable based upon a unique packet identifier (PID) (206);

25 broadcasting one or more earlier ones of said plurality of segments (200), that chronologically are intended to precede later segments in said program, more frequently than said later segments.

15. The method according to claim 14 further comprising the step of broadcasting with at least one of said plurality of program segments (200) a key table (201) containing packet count information corresponding to the number of data packets contained in at least one of said program segments.

5 16. A video on demand (VoD) player (300) comprising:

demultiplexor means (304) for demultiplexing a plurality of multiplexed program segments, each having a unique packet identifier (PID) (206) and each corresponding to a fractional part of an entire program;

10 storage means (308) for concurrently storing two or more of said plurality of program segments (200) during a predetermined time period.

17. The VoD player according to claim 16 further comprising means (302) for receiving and storing (308) a key table containing packet count information corresponding to a number of data packets contained in at least one of said program segments.

15 18. The VoD player according to claim 17 further comprising means for identifying (306) at least one of a beginning and an end of one or more of said plurality of program segments (200) using said packet count information.

19. The VoD player according to claim 17 further comprising means for determining (306), based on said packet count information, when a complete set of program
20 segment data packets has been received.

20. The VoD player according to claim 17 further comprising means for determining a playback order of said plurality of program segments based on said packet count information.

21. The VoD player according to claim 20 further comprising means for playing
25 back in order and without interruption a first and all subsequent ones of said plurality of program segments.

22. The VoD player according to claim 17 further comprising means for receiving (302) and storing (308) at least a first program segment corresponding to a beginning portion of said entire program on at least one of a different transponder channel and at
30 a different time as compared to a remainder of said program segments.

23. A VoD server (108) comprising:

means for defining a plurality of program segments, each corresponding to a fractional part of an entire program

means for multiplexed transmitting at least two of said plurality of program segments (200) concurrently, with each program segment separately identifiable based upon a unique packet identifier (PID) (206);

means for broadcasting one or more earlier ones of said plurality of segments (201), that chronologically are intended to precede later segments in said program, more frequently than said later segments.

24. The VoD server according to claim 23 further comprising means for broadcasting with at least one of said plurality of program segments (200) a key table (201) containing packet count information corresponding to the number of data packets contained in at least one of said program segments (200).

25. The VoD server according to claim 23 further comprising means for transmitting a segment packet count (SPC) data for one or more of said plurality of program segments (200), said SPC data identifying a position within a program segment of a transmitted packet containing program segment data.

26. The VoD server according to claim 25 wherein said SPC data is private data (212) in the adaptation field (210) of the MPEG-2 transport.

27. The VoD server according to claim 23 further comprising means for transmitting at least a first program segment corresponding to a beginning portion of said entire program on at least one of a different transponder channel and at a different time as compared to a remainder of said program segments.